
Whittemore- Robbins Carriage House Restoration

Project Completion Report

Town of Arlington

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The Whittemore-Robbins House exhibits the scale, proportion, dignity, and decoration of the highest Federal-style architecture. The house, along with the Carriage House and Cottage, represent one of the few intact estates that were built in Arlington during the 1800s. The complex is a visual reminder of both the commercial prosperity of early Arlington and the critical role that the Robbins family played in the development of a civic center for Arlington. The Whittemore-Robbins House and its carriage house originally stood on the site of Robbins Library, and faced east. In 1890 the structures were moved to the rear of the Robbins lot and rotated to face north (towards Massachusetts Avenue). It is important to note that after the relocations the carriage house stood at approximately the same distance and general relationship to the mansion as when both structures were on their original sites.¹

The Whittemore-Robbins Carriage House (built ca. 1800) was donated to the Town of Arlington in 1931. For the purpose of determining the character defining features of the building, the period of significance was identified as the approximate 131 year span from initial construction to when it was donated. An earlier report identified the character defining features of the carriage house and was presented to the Town and the architects who would design the forthcoming project, Andrew J. Cannata, AIA, NCARB, Principal of *Andrew Jerome Cannata, AIA – Architect* in Boston, and Gerald J. Sullivan, AIA, NCARB, LEED AP, President of *Sullivan Buckingham Architects* also of Boston.

Today the Whittemore-Robbins House is used on weekends for events, such as weddings, and the Carriage House contributes to the appeal of the house itself. The events generate revenue for the Town and will be used for the maintenance of the main house and the Carriage House. The Carriage House also serves in an ancillary or support capacity as storage for tents, tables, chairs and other equipment needed for functions. Given the level of deterioration of the structure, there was significant concern regarding the continued use of the space.

An architectural description identified the character-defining features as follows: "The main block of the building is consistent with the Adamesque, federal style popular in this region from 1780 to 1820.² Such buildings are typically two-story, rectangular in construction, with side gable or low-hipped roofs. The flushboard siding on the front façade of the carriage house was meant to imitate stone and is considered a high-style elaboration. A semi-circular or elliptical fanlight over the front entryway is also a character defining feature of the style and found on the Whittemore-Robbins House. That motif was incorporated over the barn doors as well as part of the fenestration. Windows arranged symmetrically, typically double-

¹ Arlington Community Preservation Committee. *Request for Funding: Rehabilitation of the Whittemore-Robbins Carriage House*. 2016.

² McAlester, Virginia Savage and Lee McAlester. *A Field Guide to American Houses*. New York: Knopf, 1984.

hung, six over six sash separated by thin wooden muntin bars are also character defining features of the building style.”³

It was the recommendation of that report that the building be preserved and maintained as it then appeared. That meant replacement of elements of the various systems of the envelope that had outlived their useful service lives. For example, when sheet metal flashing assemblies are at the end of their useful service life the infiltration of water is imminent and they must be replaced. But they must be replaced *in kind*, with new copper sheet metal that is installed in the same form and dimension as the details and assemblies that they replace.

While it was also the general recommendation of the report that the materials that comprised the systems of the building envelope be preserved and changed as little as possible, the obvious exception was when those materials were failing or near failure. In those instances, replacement in kind with like materials is warranted. Some historic district commissions have allowed the use of substitute materials for elements such as porch skirt boards, finials and rooftop balustrades that are highly susceptible to water damage, close to grade and/or relatively inaccessible. While the use of such materials may minimize the degree of maintenance required, they are not a substitute, and should be used only in extreme situations.

Later it was learned that some significant features of the building had been significantly altered or were missing altogether. According to public historian Richard A. Duffy,⁴ “[c]rowning the roof [of the carriage house] was a four-sided dove-cote cupola (which could be reproduced inexpensively and durably as a nonfunctioning decorative element as part of the upcoming restoration).” Also, “[t]he single-story wing was a carriage shed with two open bays.” This statement was supported by photographic evidence⁵ and included in the report.

As indicated earlier, the general recommendation of the report that identified the character-defining features was for the *preservation* of the building. *Restoration* of the building to depict the property at a particular period of time in its history, while removing evidence of other periods, is considered a less desirable approach unless those alterations are inappropriate. Further, *reconstruction* to re-create vanished or non-surviving portions of a property for interpretive purposes (such as the dove-cote) is considered less desirable still, according to the Secretary of the Interior’s Standards for the Treatment of Historic Properties.⁶ As the approach to

³ Hamilton, Ward A. *Character-Defining Features of the Whittemore Robbins Carriage House*. Report presented to the Town of Arlington on November 11, 2016.

⁴ Letter from Richard A. Duffy to Adam Chapdelaine, February 29, 2016.

⁵ “Stabilization of the Whittemore-Robbins Carriage House, Town of Arlington: \$177,500,” accessed November 10, 2016. <http://www.yourarlington.com/search/news-archive/32-development/8506-cpa-030416.html>

⁶ Weeks, Kay D., and Grimmer, Anne E. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Illustrated Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Washington, D.C.: U.S. Government Printing Office. 1995

treatment deviates away from *preservation*, the historic integrity of the building may diminish unless a great deal of consideration is afforded to the research and justification for said alterations.

As the Town considered plans for the work, esoteric considerations such as *preservation vs restoration* were viewed in context: the Whittemore Robbins Carriage House was moved from its original location approximately 126 years ago. When a historic building has been moved “it loses its integrity of setting and its ‘sense of place and time’ — important aspects of the historic character of a building and its environment.”⁷ While this appeared initially to be an entirely negative statement, it afforded the argument that this part of the history of the building loosened the otherwise rigid rules for interpretation and opened the door to the often frowned upon practice of reconstruction.

The design team of Cannata and Sullivan, with sixty-nine years of experience combined, embraced the challenge:

The single common aspect of doing such restoration and rehabilitation work is that the structures were all built a century or more ago by craftsmen long-gone employing methods that were, for the most part, abandoned long ago. Generally speaking there is no specific template for approaching any specific building as the blueprints, if they ever existed at all, are also long gone. To do a quality project an architect must delve deep into the bones of each building and it is there that, at some point, the building itself will inform him what must be done and how to accomplish it.

Over the years, failures throughout the building envelope necessitated repairs which—in many instances—were wholly inappropriate and unsympathetic to the character and style of the building. The entry doors, barn doors, contemporary garage doors and accompanying hardware were representative of material choices inconsistent with the building’s Adamesque style. The designers looked at several similar historic carriage barns in the area and considered carefully the materials and methods of construction employed in like buildings. The result was not only the recreation of missing important architectural details but also a tasteful and historically appropriate improvement to the building’s overall aesthetic appeal.

The flushboard siding, found here on the front façade, was meant to imitate stone and is considered a high-style elaboration of the building style. Over the years, poor roof drainage contributed to failures in the cladding. Care was taken to preserve as much of the historic building fabric as rotted and deteriorated sections of cladding and architectural woodwork were replaced with long-lasting, sustainable materials such as cypress and western red cedar. Freedom Gray sheet metal (copper with a tin/zinc alloy coating) was used to create a drip cap atop window

⁷ Curtis, John Obed. *Moving Historic Buildings*. Washington, DC: U.S. Department of the Interior, Heritage Conservation and Recreation Service, Technical Preservation Services Division, 1979.

lintels and the newly-replicated ellipses and keystones. Beneath the roof covering materials and behind the cladding rotted sheathing was replaced with new wooden board sheathing.

The careful preservation of the fenestration is an integral part of most significant restoration projects and the Whittemore-Robbins Carriage House is no exception. The window sash were removed and transported to a shop where they were refurbished. This includes the tedious work of repairing wooden rails and stiles as well as the glazings, lights and muntin bars. The window jambs, sills, parting beads and weights were also carefully restored so that once reinstalled they were again fully operable.

The work was performed by artisan craftsmen in the employ of *Vareika Construction* of West Bridgewater, Massachusetts. Under the expert guidance of firm principal Bob Vareika, this outfit has been responsible for several important restoration projects: Stonehurst, the Robert Treat Paine Estate in Waltham, Buckman Tavern in Lexington, the Simes House in Plymouth and Shepherd Brooks Manor in Medford. *Vareika Construction* possessed the resume skillset needed to successfully execute the plan to restore the Whittemore Robbins Carriage House.

The failures in the wooden gutter roof drainage system also contributed to failures in the structure. As the layers were peeled away, significant structural issues were detected in the framing of the cornice and walls. Over seventy-five percent of the buildings horizontal perimeter beams were rotted and needed to be replaced. Arthur H. MacLeod, P.E., Principal of *MacLeod Consulting, Inc.*, in Belmont was the project engineer and well-versed in the preservation of historic structures. Care was taken to design and implement a plan that would restore the structural integrity of the building without compromising historic building fabric. Photo documentation of these conditions is included in this report.

New steel plates and wood framing members were joined to the existing, original frame. Around the entire perimeter of the main house block of the building all rafter tails and outriggers were rebuilt. New framing members were sistered to existing framework to support the load of the gutter system and to provide sound nailing surfaces for new trim, fascia and soffit plates. Given the extensive insect damage and rot uncovered, new wood was treated with bora-care with a mold-care additive with anti-fungicidal properties. Existing non-treated ledger boards were replaced with kiln-dried, pressure treated lumber at the main floor concrete slab and modern anchors and epoxy products were used where pinning to foundation walls was necessary.

Much effort was made to remain true to the building's aesthetic and historical character, including details which not be otherwise readily apparent. For example, a missing section of the foundation, necessary for supporting a garage wall, replaced below grade with a concrete frost wall and above grade with concrete masonry blocks in an effort to show deference to the building style. At the front of the building, where replacement of beveled cement blocks was necessary, matching units were reclaimed from inside the garage space. There, a passage had been

created between the bays and several of the original blocks were then available for re-use where needed.

The wooden gutters, an important character-defining feature of the cornice were replaced in kind. Gutters, generally, are high maintenance elements of the building envelope and prone to failure. Wooden gutters are more problematic still and are often to blame for large scale rot and damage as was seen here. However, the architects incorporated a thoughtful solution: the gutters also received a copper sheet metal lining that will preserve and protect the troughs for decades to come.

The garage wing, with its inappropriate modern doors, was returned to the covered "firewood" porch seen in the historic photograph. The porch ceiling was finished with wainscoting repurposed and taken from the carriage house attic. Clapboard siding, inside, was salvaged and reused on the exterior where failures had occurred. Where the main structure sidewall meets the garage roof the siding was removed and new shingles properly step flashed. The asphalt shingle roof covering materials were replaced with an engineered, synthetic slate product that is fire rated and carries a 50 year warranty.

At grade, a crushed stone border delineated by cobblestones was installed at the perimeter of the building. This added measure will contribute to building maintenance as roof water runoff is controlled and splash up is minimized. These are critical issues with wooden structures where rot is a concern—a lesson hard-learned with the carriage house.

The crowning jewel of the project was the recreation of the soaring mast and dovecote on the roof top. Working with the historic photograph as a basis for design, the means and methods of dovecote construction were researched and documented. Cannata and Sullivan "felt strongly that this element was so unique that it would be a lost and rare opportunity not to replicate it in this once-in-a-century rehabilitation effort." It may be argued, perhaps, that the most significant character-defining feature of the Whittemore Robbins Carriage House has been thoughtfully returned to its rightful place.

The project grant award to restore the Whittemore-Robbins Carriage House was \$289,000 of which architectural and preservation consultant service fees totaled \$28,800. Even after additional work to correct unforeseen latent conditions that threatened the building's structural integrity, the project was completed on time and \$16,000 under budget. Said Clarissa Rowe, Chairperson of the Arlington Community Preservation Act Committee: "This was an important project for the Town not only because of the significance of this site and this building, but also because it was one of the first historic preservation projects funded with CPA dollars in Town. This town-owned historical asset was suffering from years of neglect in light of funding constraints. Without this timely intervention, the building was subject to continuing deterioration, and ultimately the loss of character and function. Now, the beauty of the Carriage House can be enjoyed by residents for years to come, and the Town can contemplate the future use of the building."

The Whittemore Robbins Carriage House is an important Town-owned asset whose stewardship is entrusted to the Arlington Historical Commission (AHC). "The selected team, architect, engineer, preservation consultant, contractor has transformed the historic carriage house," said AHC Commissioner Patrick Guthrie. "The completed project returns the carriage house to its proper role as a contributing feature to the Arlington Civic Block collection of significant buildings. The Arlington Historical Commission applauds the work and the importance of the carriage house as one of the inaugural Community Preservation Act historic preservation projects and looks forward to its catalyzing effect on other preservation efforts in the Town of Arlington."

Historic preservation is largely about the stewardship and conservation of buildings, and stewardship is at the heart of the environmental movement. Every time we extend the service life of a building, we avoid the environmental impacts of creating something new, we avoid the environmental impacts of our throwaway culture.⁸ The community benefits of historic preservation, however, extend beyond mere 'bricks and mortar' as best stated by New York City Landmarks Preservation Commissioner Michael Devonshire:

Historic preservation is, ultimately, not about buildings, it is about culture—which is about humanity. Our cultural trajectories result in our understanding of the technologies that permit us to shape Earth-formed materials into buildings. Buildings become the shelters and settings in which we enrich ourselves more fully. Cultural preservation—in all of its diverse forms—is as important as the preservation of buildings, if we are to fully understand what it is to be human. The saving and passing on of buildings of significance helps us to resist cultural stagnation and fosters sustained renewal.

⁸ Carroon, Jean. Sustainable Preservation: Greening Existing Buildings. Hoboken, NJ: John Wiley & Sons, Inc. 2010

Maintenance of the Whittemore-Robbins Carriage House

The most important component of any plan to preserve a historic structure is maintenance. As soon as a building is constructed or rehabilitated, the natural process of deterioration begins. Preservation has been defined as "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the on-going maintenance and repair of historic materials and features rather than extensive replacement and new construction."⁹

Regular inspection and maintenance of systems will help preserve the integrity of historic building fabric. If that fabric is maintained, deterioration will be minimized or eliminated. Maintenance is the most cost effective method of extending the service life of a building system. By logical extension, maintenance is the key to preservation. While the decay of components of the envelope cannot be avoided, neglect can actually cause this process to increase at an exponential rate. The use of the wrong materials and methods will often cause worse damage to irreplaceable historic building fabric.

When considered in the long term, the cost to maintain historic structures is significantly less than the restoration of historic systems and materials, and it creates far less disruption to building occupants. When a property owner or manager creates a maintenance program for their building, it is strongly recommended that they seek the counsel of a preservation consultant, and/or experienced contractor. The maintenance program should clearly identify and describe courses of action that are specific to the building. Every historic structure, no matter how small, should have a written guide that includes:

- Lists and schedules for periodic inspections of each system. These should be set-up in a 'checklist' format, to ensure uniformity of procedures over time;
- Blank elevations of the building to be marked up during inspections and after any work takes place;
- A full set of actual photographs that comprehensively document the conditions of the entire structure as well as a digital copy of each. This album will grow over time;
- An emergency list of contractors who can be called upon in an emergency, especially HVAC, electrician, plumber, and roofer;
- Individualized procedures for the historically appropriate handling of the individual systems and materials of the building. For example, regular cleaning and inspection of gutter assembly, maintaining paint in sound condition, inspecting for presence of wood destroying insects and pests, maintenance or removal of any vegetation around the structure so it does not create moisture issues; and,

⁹ National Park Service, Nationwide Programmatic Agreement Toolkit for Section 106 of the National Historic Preservation Act, glossary of terms

- Hard copies of completed reports that document all work and inspections. Include copies of estimates, contracts, warranty cards, paint colors, mortar recipes, materials sources, and any other information that will be needed by future stewards of the structure.

Maintenance is the most important preservation treatment for extending the life of an historic property. It will slow the natural process of deterioration and prolong the natural service lives of the historic fabric of the envelope. A written maintenance plan will help preservation planners organize, schedule inspections, and guide the work necessary to for a historic building. When a property owner or manager creates a maintenance program for their building, it is strongly recommended that they seek the counsel of a preservation consultant, and/or experienced contractor. The maintenance program should clearly identify and describe courses of action that are specific to the building. Every historic structure, no matter how small, should have a written guide. When the full life cycle of a building is considered, there is no smarter money spent than on maintenance.

From the report that identified the character-defining features of the Whittemore-Robbins House:



The main block of the building is consistent with the Adamesque, federal style popular in this region from 1780 to 1820. Such buildings are typically two-story, rectangular in construction, with side gable or low-hipped roofs. The flushboard siding (seen here on the front façade) was meant to imitate stone and is considered a high-style elaboration. A semi-circular or elliptical fanlight over the front entryway is also a character defining feature of the style and found on the Whittemore Robbins House. Here, the motif was incorporated over the barn doors as well as part of the fenestration. Windows arranged symmetrically, typically double-hung, six over six sash separated by thin wooden muntin bars are also character defining features. *Source: Ward A. Hamilton*



Existing Conditions, before commencement of work. 03 Nov 2016. *Source: Ward A. Hamilton*



Existing Conditions, after completion of work. 29 July 2017. *Source: Ward A. Hamilton*



The Whittemore Robbins House, carriage house in background, circa 1890, with extant rooftop dovecote. A single door to the right of the double doors had since been converted to a window. The double doors shown here were significantly taller than the existing garage door.
Source: <http://www.yourarlington.com/search/news-archive/32-development/8506-cpa-030416.html>



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Community Preservation Act funds approved in FY17 to preserve this historic asset. *Source: Jim Feeney*



Main structure, front corner. Deteriorated framing members. *Source: Jim Feeney*



Main structure, front right corner. Deteriorated LVL Beam and 2x shoring installed 2001. *Source: Jim Feeney*



Main structure, front right corner. Offset CMUs, disjointed and differentially settled sill plate. *Source: Jim Feeney*



Main structure, front right corner. Deteriorated framing, original and circa 2001. *Source: Jim Feeney*



First garage bay, rear wall. Missing CMU course, frost wall. *Source: Jim Feeney*



First garage bay, rear wall. New CMU grade beam. *Source: Jim Feeney*



Main structure. Main perimeter beams at lower roofline, roof purlin had significant water and insect damage. Source: Jim Feeney



Main structure. Main perimeter beams at lower roofline, roof purlin had significant water and insect damage. Source: Jim Feeney



Main structure. Main perimeter beams at lower roofline, roof purlin had significant water and insect damage. Source: Jim Feeney



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